FORM 6200-8 (1/64)
UNITED STATES GOVERNMENT

Memorandum

Department of Agriculture—Forest Service R-10
P. O. Box 1628, Juneau, Alaska 99801

TO : S. T. Olson, Chief, Branch of Wildlife Management

File No. 2620

FROM : W. L. Sheridan, Fishery Biologist

Date: July 19, 1963

SUBJECT: Planning (Indian Creek Spawning Channel)

Your reference:

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In the event we receive financing, we should seriously consider constructing an artificial spawning channel in Indian Creek at Hollis. A flood plain channel was constructed in this stream, in about 1961, financed by the Wood Products Industry, Ketchikan Pulp Company, Fisheries Research Institute, and the Forest Service. This channel failed because it was not designed for the excessive discharges that occurred.

A controlled flow channel would, however, be successful. In anticipation of need and as you requested, I have prepared a preliminary benefit/cost analysis for the Indian Creek spawning channel. We are now refining this type of analysis to include discount and some other factors. After the method of analysis has been refined, this preliminary analysis will be developed further. For now the benefit/cost analysis follows:

1. Natural area (pink salmon production)
   $N_h = (0.385)\ (20,000) - 0.1\ (20,000) = 7,700$ harvestable salmon

2. Spawning channel (pink salmon production)
   $N_h = 2.10\ (20,000) - 0.14\ (20,000) = 39,200$ harvestable salmon

3. 39,200 - 7,700 = 31,500 pink salmon

Benefit/cost ratios for 10-year period in Indian Creek channel if channel costs $30,000, $50,000, $75,000 and $100,000 are as follows:

	Fisherman	Wholesale
$ 30,000	$\frac{157,500}{30,000} = 5.3$	$\frac{393,750}{30,000} = 13.1$
$ 50,000	$\frac{157,500}{50,000} = 3.2$	$\frac{393,750}{50,000} = 7.9$
$ 75,000	$\frac{157,500}{75,000} = 2.10$	$\frac{393,750}{75,000} = 5.3$
$100,000	$\frac{157,500}{100,000} = 1.6$	$\frac{393,750}{100,000} = 3.9$

WLSheridan:cg

W. L. Sheridan